

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/842,128	TEO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sharad Rampuria	2683	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/9/05.
2. ☒ The allowed claim(s) is/are 1-42 and 46.
3. ☒ The drawings filed on 26 April 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17:2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

*Allowable Subject Matter*

I. The following is an examiner's statement of reasons for allowance:

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li et al. disclose a field of wireless communications; more particularly, the invention relates to multi-cell, multi-subscriber wireless systems using orthogonal frequency division multiplexing (OFDM).

Liu et al. disclose a base-station includes a memory unit to store broadband spatial signature vectors associated with each subscriber and traffic channel allocation logic. The vectors are a function of frequency. The traffic channel allocation logic allocates OFDMA channels using the broadband spatial signature vectors of the subscribers.

Wong et al. disclose a forward link beam forming and interference cancellation via a base station adaptive antenna array in order to increase data rate to subscriber units (mobiles) within a service sector of a wireless communication system employing e.g. a CDMA air interface.

Goldberg et al. disclose a communication system transmits and receives communications within a sectorized cell between at least one primary station and at least one secondary station. The communication system includes a unit for generating and shaping a beam; an antenna for transmitting and receiving signals within said beam; and a unit for directing the beam. The shaped beam is directed at a plurality of predetermined directions; either continuously or discretely.

Bartholomew disclose a method for dynamically controlling radiation patterns and, more specifically, to an antenna system having dynamically controllable radiation patterns for use in

cellular, trunking, and other mobile communication systems.

Alamouti et al. disclose a high quality PCS communications are enabled in environments where adjacent PCS service bands operate with out-of-band harmonics that would otherwise interfere with the system's operation. The highly bandwidth-efficient communications method combines a form of time division duplex (TDD), frequency division duplex (FDD), time division multiple access (TDMA), orthogonal frequency division multiplexing (OFDM), spatial diversity, and polarization diversity in various unique combinations. The method provides excellent fade resistance. The method enables changing a user's available bandwidth on demand by assigning additional TDMA slots during the user's session.

Therefore, all of the above prior art fails to disclose a transmission apparatus that operates to receive the processed service and data traffic information, to transmit the processed service information on a first set of carriers to the mobile terminals within the coverage area with at least one first transmission beam and to transmit the processed data traffic information on a second set of carriers to the target mobile terminal on at least one second transmission beam, the second transmission beam being a directional transmission beam.

Claims 43-45, 47 were cancelled in previous action.

Claims 1-42 and 46 are allowed based on Forssen et al. (US 5615409) in view of Chrichton et al. (US 6330459).

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***Conclusion***

II. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870.

The examiner can normally be reached on Mon-Fri. (8:15-4:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC@uspto.gov](mailto:EBC@uspto.gov).

Sharad Rampuria  
Examiner  
Art Unit 2683

August 11, 2005



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600